REMARKS

Claims 1 – 13 are pending in this application. Claims 1-9, 11, and 12 have been previously indicated as being allowable. Claim 10 is presently rejected. No claim amendments have been made in claims 1-12 of this response. Reconsideration as to the allowability of claim 10 is respectfully requested. New claim 13 has been added.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sun et al., (U.S. Patent No. 6,678,416) in view of Ito et al. (U.S. Patent No. 6,377,309). The present claimed invention is for a program or transport stream coded according to a non object-based coding standard (such as the MPEG-2 standard), in which the stream is comprised of an elementary stream for the coding of a video object, also an elementary stream for the coding of a background image, and an elementary stream for the coding of a segmentation key defining the video object.

Sun et al. disclose an object segmentation and tracking process. A segmentation program is implemented, which identifies a video object within a video frame. Video object data is extracted for each video frame in which the object is tracked. Sun et al. neither disclose nor suggest "a process for coding video images according to a non object-based coding standard" as in the present claimed invention. Rather, Sun et al. disclose relates to tracking of a video object, this is unlike "coding video images" as in the present claimed invention.

Ito et al. disclose the use of MPEG 2 and MPEG 4 standards for coding data. Ito et al. disclose that video and sound objects are combined into a multiplexed stream with scene configuration information that describes the positions appearance and disappearance times of the object in a scene. In the system disclosed by Ito et al., the coding/decoding of the objects requires an MPEG 4 coder/decoder (see Ito et al., Abstract). This is further shown in Figure 19 of Ito et al. which shows the system having an "MPEG 4 image decoding circuit" and an "MPEG 4 system data decoding circuit". The transmission of objects is made by segmenting an image into VOPs and transmitting VOPs according to MPEG 4 (see Ito et al., column 5, lines 46-53).

The combination of systems disclosed by Sun et al. and Ito et al. result in a system that uses the MPEG 4 standard to code the objects corresponding to the segmentation. It is well known that MPEG 4 is an object-based coding standard. However, this is unlike the present claimed invention which produces a program or transport stream coded according to a non-object based coding standard" i.e. the MPEG-2 standard. This distinction is made clear in claim 10 in its current form. Specifically, both Sun et al. and Ito et al. neither disclose nor suggest forming a program or transport stream in accordance with a non object-based coding standard comprised by combining an elementary stream for the coding of a video object, the elementary stream for the coding one of a background image, and the elementary stream for the coding of a segmentation key defining the video object; as defined in the claimed limitations recited in claim 10.

It is the specific goal of the present claimed invention to perform a coding of objects without using the MPEG 4 or object based coding standard. This is highly advantageous as the present claimed invention uses existing non object-based coders/decoders such as MPEG 2 coders/decoders. Thus, using a system disclosed by a combination of Sun et al. and Ito et al. requires the use of an MPEG-4 decoder which is an object based coder/decoder. An additional advantage provided by the present claimed invention is increased flexibility at the decoder side, for example when constructing a scene. Furthermore, the separate coding at the coder side allows for chroma-key operations to be performed at the production site with the highest quality. These operations can then be reused as desired without repeating the operation. An example of where this is useful is the insertion of advertisements in a picture.

The present claimed invention separately codes extracted video objects and chroma-key data according to the non object-based coding standard such as the MPEG 2 standard, not MPEG 4 standard which as required by Ito et al. Additionally, Sun et al. and Ito et al. neither disclose nor suggest using elementary streams to be combined "to provide a programme stream (PS) or transport stream (TS) according to a non object based coding standard" as in the present claimed invention. It is the "transport

stream or program stream" of the present claimed invention which carry such data sent to the decoder.

While Sun et al. and Ito et al. disclose the segmentation of an image, they do not disclose or suggest the use of segmentation frames and the coding of such frames as in the present invention recited by claim 10. Therefore, Sun et al. and Ito et al. neither disclose nor suggest "coding (3) the segmentation key relating to the video object, according to said standard so as to form an elementary stream" as in the present claimed invention. Furthermore, Sun et al. and Ito et al. neither disclose nor suggest that "said standard" is a "non object-based coding standard" such as MPEG 2.

In view of the above remarks and amendments to the claims, it is respectfully submitted that Sun et al. taken in combination with Ito et al. does not make the present claimed invention unpatentable. Thus, it is further respectfully submitted that this rejection has been satisfied and should be withdrawn.

It is noted that each of the concepts recited and argued above, were also considered in the prior indication of allowance of other claims in this application by the Examiner. For example, it is precisely the same claim limitations included in claim 10 that were deemed to make claim 1 allowable. The Examiner appears to be focusing on the difference in the wording for the combination of the elementary streams between claim 1 and claim 10. In claim 1, the limitation for combination of the elementary streams relating to the object and the background image is recited as being multiplexed (which is generally thought of a generic word/process for combining more than one element). Similarly, claim 10 also recites the process for combination of the elementary streams relating to the object and the background image by use of the word "comprising". Aside from claim 1 being directed to a method, and claim 10 being directed to a signal structure, claims 1 and 10 both recite the same prior art differentiating claim limitations, with the only real difference being a "multiplexing step" in claim 1 being replaced by the equivalent representation in claim 10 of what minimum components the program or transport stream is "comprised of". Therefore,

the Examiner's reconsideration with respect to the rejection of claim 10 is respectfully requested.

Finally, new claim 13 has been added. Claim 13 is an apparatus claim cast in means-plus-function language closely paralleling the limitations recited in claim 1. Since claim 1 has been determined to be allowable, it is believed that claim 13 is also in condition for allowance.

Having fully addressed the Examiner's rejection, it is believed that, in view of the preceding remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicants' attorney at the phone number below, so that a mutually convenient date and time for a telephonic interview may be scheduled.

It is believed that no additional fees are due with regard to this response; however, if it is determined that any additional fees are due with respect to this application, please charge any other additional costs that may be due to Deposit Account 07-0832.

Respectfully submitted,

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CERTIFICATE OF MAILING under 37 C.F.R. §1.8

I hereby certify that this amendment is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

Date: January 26, 2005

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